GASKET FOR CLADDING SYSTEM

This invention relates to an improved method of producing a gasket for a building cladding, curtain wall or glazing system, and to the gasket so made.

The term `gasket' refers to the rubber or other plastics material extrusions used to hold or seal an infill into a framework or the like in a curtain walling/glazing system in the construction of buildings.

In our published UK patent specification number 2 023 703 and our European patent publication number 0 059 058 building systems are described in which infill members are held in place on a framework by means of a flexible gasket which locates and is gripped by the framework and has a limb extending so as to bear against the infill and hold it in place. This system is very successful and is used extensively. A particular feature of it, which appeals to architects, is that the gasket can be of various colours, or indeed multi-coloured, to produce a desired aesthetic effect.

One problem area in connection with the gaskets of the above systems is in connection with the gasket corners. Reference to figures 1 and 2 of the accompanying drawings illustrates the current method of producing corners. The main runs of the gasket are extruded to the desired length. Two extrusions 10 are inserted into a mould 12 and a shot of silicone compound is inserted under pressure into the heated mould forming a joint 14 between the two extrusions. Because the moulding is carried out under pressure, it is easy for protruding lines 16 to appear on the resultant product, which are not aesthetically pleasing. Similarly, because the corner is injected rather than extruded, there is very often a colour differential and a different surface finish between the corner 14 and the extrusions 10. In addition, the corner needs to be radiused

at 18 to ensure weather-tightness when a clean right angle may be preferred aesthetically. Finally, it is only possible to use a single solid colour whereas the extrusions can be produced in multiple colours or with metallic pigments.

The invention seeks to provide a method of forming a gasket joint, e.g. corner, improved in the above respects.

According to the present invention there is provided a method of forming a joint between two plastics extrusions which comprises mitring the extrusions so that they form the desired angle to one another, removing part of the rear face of each extrusion, placing the mitred extrusions in a mould and injecting a resin material whereby to bond the extrusions to one another and produce the desired joint configuration.

Because the front surface of the joint in accordance with the invention is entirely made up from the original extrusion, there are no problems with raised sight-lines, colour differentials, surface differences, or colour matching. Moreover, the method of the invention allows a corner to be produced which has a clean right angled rather than radiused inner portion.

The extrusions will be made from a suitable plastics materials, e.g. as described in the above mentioned patent publications. Currently it is preferred that the extrusions are made from a silicone rubber, although other plastics materials may be used. Accordingly the resin used to form the joint is normally also a silicone rubber mix which will cure under heat and pressure in order to produce the joint, although other compatible plastics materials can be used. Also, although the invention is especially useful when used with the extrusions of our above referred-to patent publications, it has wider applications and can be used to join plastics extrusions in the curtain wall/glazing field generally, wherever it is desired to maintain the surface appearance of an extrusion through the

joint or corner.

The invention further includes a gaskets having joints formed in accordance with the above.

The invention will be described further, by way of example, with reference to the accompanying drawings, in which:

Figures 1 and 2 are diagrammatic illustrations of the current method;

Figure 3 is a front elevational view of a seal in accordance with the method of the invention;

Figure 4 is a perspective view corresponding to figure 3;

Figure 5 is a partial sectional view;

Figure 6 is a rear elevation corresponding to figure 3;

Figure 7 is a rear perspective view;

Figure 8 is a cross-sectional view of the extrusion on an enlarged scale; and

Figure 9 shows perspective views of the extrusion from both sides.

Referring to the drawings, and firstly Figures 1 and 2, as has been indicated above in the existing method of forming a corner joint two extrusions 10 are brought together in a mould 12 and injected with a silicone material under heat and pressure to produce a joint 14. The inner corner of the joint 14 is radiused at 18.

Referring now to Figures 3 to 9, in the method of the invention, by contrast, and using like numbers for like parts,

the extrusions 10 are mitred at an appropriate angle, for example 45° to produce a 90° corner (although other angles may be used for different shape infill panels). The mitred ends 20 are brought together in a butt joint 22. The extrusions 10 have front faces 24 and rear faces 26. The latter are moulded with indented "foot" portions 28 designed to locate in channels in the building framework (not shown).

In the area of the joint the back of each extrusion 10 is cut away along a line 30 at the back of the extrusions. Thus, the front faces 24 are left untouched.

The butt joined cut-away extrusions are then put into a mould of the requisite shape and injected with a suitable resin 32, e.g. a silicone, as before. The mould is shaped to continue the foot portions 28 and to provide a pillar 38 if required by the system. From the front, therefore, the extrusions are unbroken and any multi-colour lines, metallic lines, or the like continue unbroken to the butt joint 22. There are no unsightly raised lines and the problems with the previous method of joining are overcome.

~~The extrusions 10 have sealing lips 40 as before which bear~~ against the infill, e.g. double glazing unit, in ~~use~~. In accordance with the invention it is preferred, ~~in~~ addition, to provide a second sealing lip 42 on the ~~extrusions~~ 10 which can be continued in the area of the ~~join~~ 32. This ensures that the corner is weather-tight and ~~obviates~~ the need to radius the inner corner of the ~~join~~, i.e. the seal 40, allowing a "clean" 90° angle to ~~be~~ achieved. It is preferred to radius the inner ~~lip 42~~ and have a clean ~~right outer lip 40.~~

As can be seen from figure 8, some extrusions have different coloured areas 24a and 24b and these can be carried right through the joint in the method of the invention.